

§ 171.057 Intact stability requirements for a sailing catamaran.

(a) A sailing vessel that operates on protected waters must be designed to satisfy the following equation:

$$\frac{0.1(W)B}{(As)(Hc)} \geq X$$

Where—

B=the distance between hull centerlines in meters (feet).

As=the maximum sail area in square meters (square feet).

Hc=the height of the center of effort of the sail area above the deck, in meters (feet).

W=the total displacement of the vessel, in kilograms (pounds).

X=4.88 kilograms/square meter (1.0 pounds/square foot).

(b) A sailing vessel that operates on partially protected or exposed waters must be designed to satisfy the following equation:

$$\frac{0.1(W)B}{(As)(Hc)} \geq X$$

Where—

B=the distance between hull centerlines in meters (feet).

As=the maximum sail area in square meters (square feet).

Hc=the height of the center of effort of the sail area above the deck, in meters (feet).

W=the total displacement of the vessel, in kilograms (pounds).

X=7.32 kilograms/square meter (1.5 pounds/square foot).

[CGD 79-023, 48 FR 51017, Nov. 4, 1983, as amended by CGD 83-005, 51 FR 924, Jan. 9, 1986; CGD 85-080, 61 FR 944, Jan. 10, 1996]

§ 171.060 Watertight subdivision: General.

(a) Each of the following vessels must be shown by design calculations to comply with the requirements in §§ 171.065 through 171.068 for Type I subdivision or § 171.075 for Type III subdivision:

(1) Each vessel 100 gross tons or more on an international voyage; and

(2) Each vessel 150 gross tons or more in ocean service.

(b) Each vessel not described in paragraph (a) of this section must be shown by design calculations to comply with the requirements in §§ 171.070 to 171.073 for Type II subdivision.

(c) Except as allowed in § 171.070(c), each vessel must have a collision bulkhead.

(d) Each double-ended ferry that is required by paragraph (c) of this section to have a collision bulkhead must also have a second collision bulkhead. One collision bulkhead must be located in each end of the vessel.

§ 171.065 Subdivision requirements—Type I.

(a) Except as provided in paragraphs (c) and (f) of this section, the separation between main transverse watertight bulkheads on a vessel, other than one described in paragraph (b) of this section, must not exceed—

(floodable length) X (factor of subdivision)

where—

the factor of subdivision is listed under FS in Table 171.065(a).

(b) The factor of subdivision used to determine compliance with paragraph (a) of this section must be the smaller of 0.5 or the value determined from Table 171.065(a) if—

(1) The vessel is 430 feet (131 meters) or more in LBP; and

(2) The greater of the values of Y as determined by the following equations equals or exceeds the value of X in Table 171.065(b):

$$Y = \frac{(M + 2P)}{V}$$

or

$$Y = \frac{(M + 2P)}{V + P1 - P}$$

where—

M, V, and P have the same value as listed in Table 171.065(a); and

P1=the smaller of the following:

(i) 0.6LN (0.056LN) where—

N=the total number of passengers; and

L=LBP in feet (meters).

(ii) The greater of the following:

(A) 0.4LN (0.037LN).

(B) The sum of P and the total volume of passenger spaces above the margin line.

(c) The distance A in Figure 171.065 between main transverse watertight bulkheads may exceed the maximum allowed by paragraphs (a) or (b) of this section if each of the distances B and C